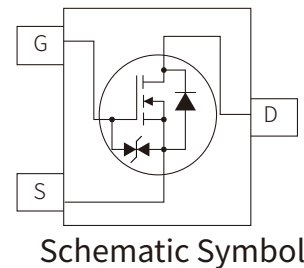
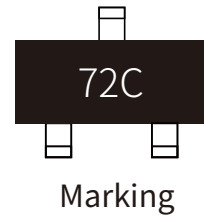
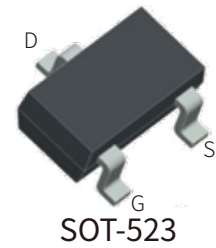


FEATURES

- | Low $R_{DS(on)}$ Provides Higher Efficiency and Extends Battery Life
- | Excellent ON resistance for higher DC current :
- | $R_{DS(ON)} < 2.2\Omega$ @ $V_{GS} = 10V$ (Type:1.8 Ω)
- | $V_{DS} = 60V, I_D = 300mA$
- | Supper high density cell design
- | High performance trench technology
- | High Power and current handing capability
- | Surface Mount Package



APPLICATION

- | Load/Power Switching for portable device
- | Charging device
- | Power supply converters circuit

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit	
Drain-Source Voltage	V_{DSS}	60	V	
Gate-Source Voltage	V_{GSS}	± 20	V	
Continuous Drain Current	I_D	$T_c = 25^\circ\text{C}$	300	mA
		$T_c = 100^\circ\text{C}$	200	mA
Pulsed Drain Current	I_{DM}	1200	mA	
Power Dissipation $T_c = 25^\circ\text{C}$	P_D	0.17	W	
Junction and Storage Temperature Range	T_J, T_{STG}	-50- +150	$^\circ\text{C}$	
Junction-to-Ambient Thermal Resistance ^a	$R_{\theta JA}$	735	$^\circ\text{C}/\text{W}$	

^a Surface mounted on FR-5 Board using 1 square inch pad size, 1oz copper

ELECTRICAL CHARACTERISTICS (T_A=25°C)

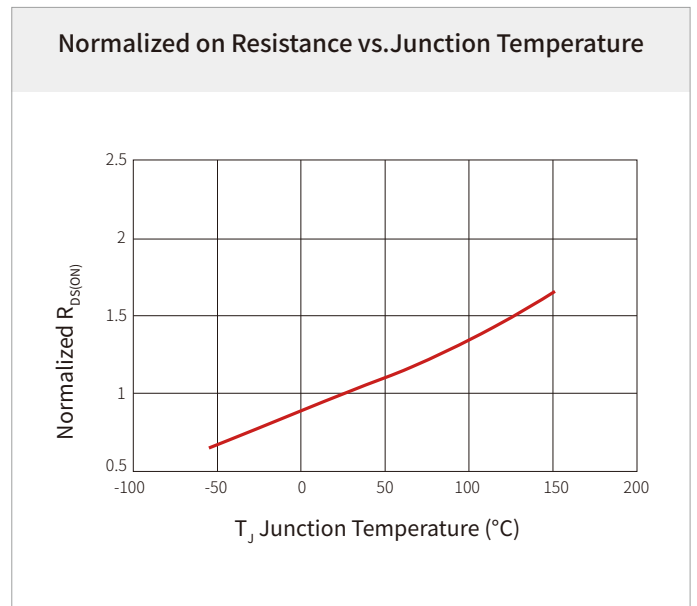
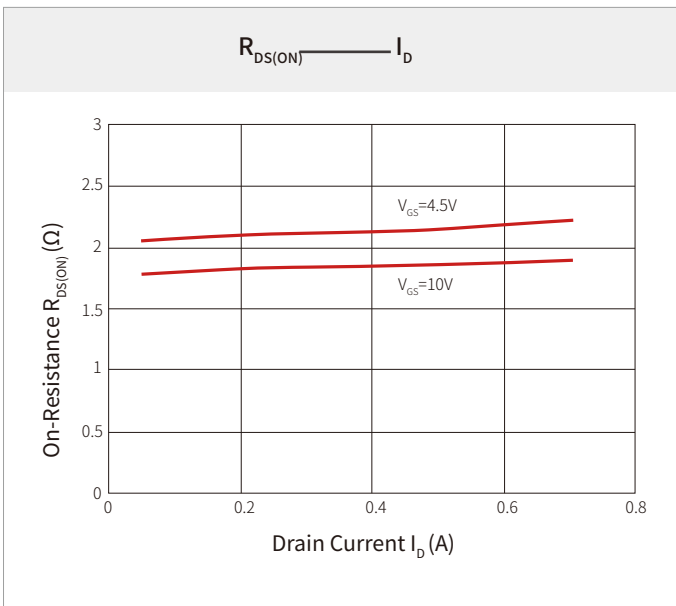
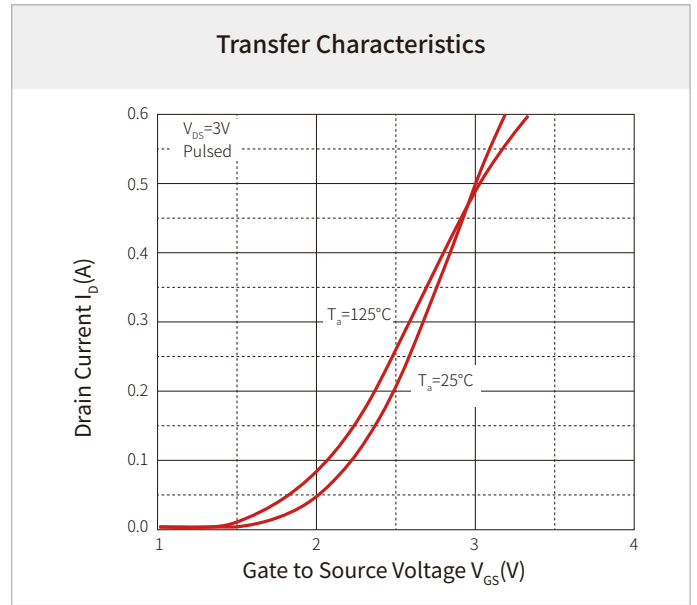
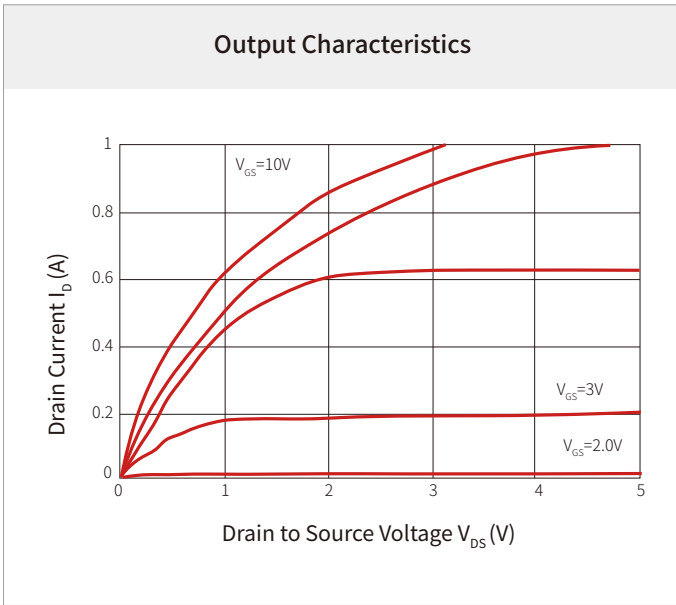
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _{DS} =250μA	60			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1.0	1.6	2.5	V
Drain Cut-Off Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	μA
Gate Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V			±10	μA
Drain Source ON Resistance	R _{DS(on)}	V _{GS} =10V, I _D =300mA		1.8	2.3	Ω
		V _{DS} =4.5V, I _D =200mA		2.1	2.87	Ω
Dynamic Characteristics						
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =300mA		1.7		nC
Gate-Source Charge	Q _{gs}			0.3		nC
Gate-Drain Charge	Q _{gd}			0.6		nC
Input capacitance	C _{iss}	V _{GS} =0V, V _{DS} =25V, f=1.0MHz		28		pF
Output capacitance	C _{oss}			11		pF
Reverse transfer capacitance	C _{rss}			4		pF
Turn-on Delay Time	t _{d(on)}		V _{DD} =10V, V _{GS} =10V I _D =200mA, R _G =10Ω		2	
Turn-on Rise Time	t _r			15		ns
Turn-Off Delay Time	t _{d(off)}			7		ns
Turn-Off Fall Time	t _f			20		ns
Drain Source Body Diode Characteristics						
Source Drain Diode Forward Voltage	V _{SD}	I _S =300mA, V _{GS} =0V			1.2	V

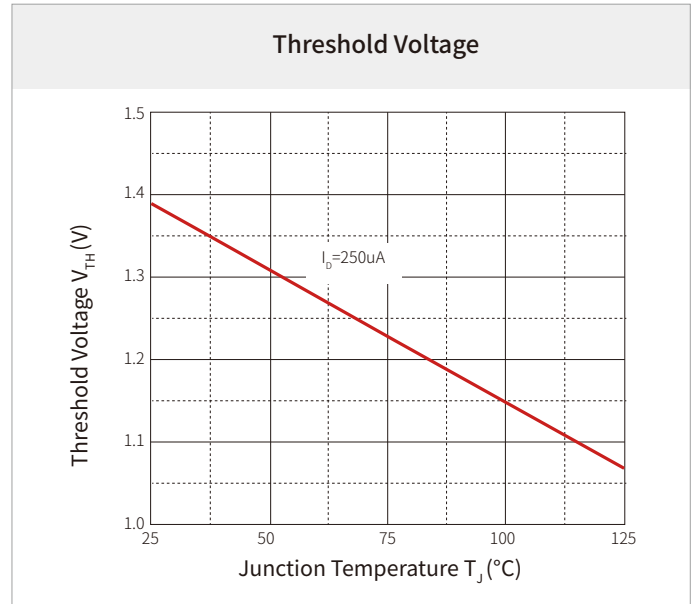
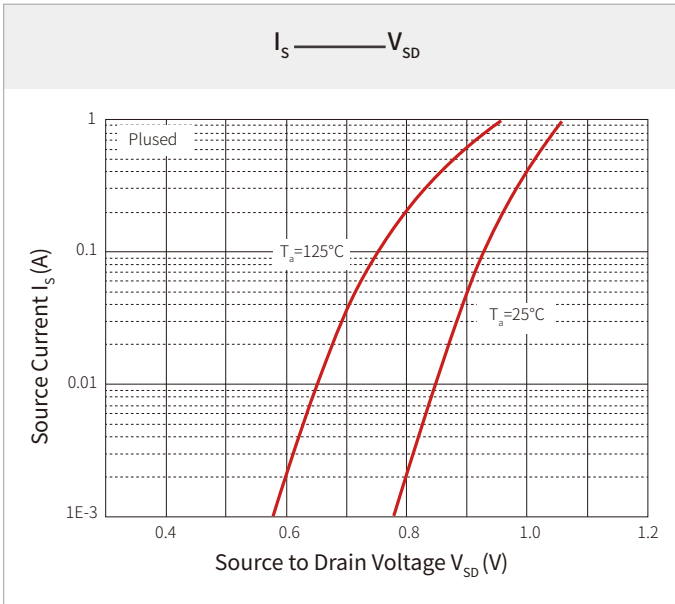
Notes:

1.Pulse Test:Pulse Width≤300μs,Duty Cycle≤2%.

2.Dynamic parameters cannot be verified

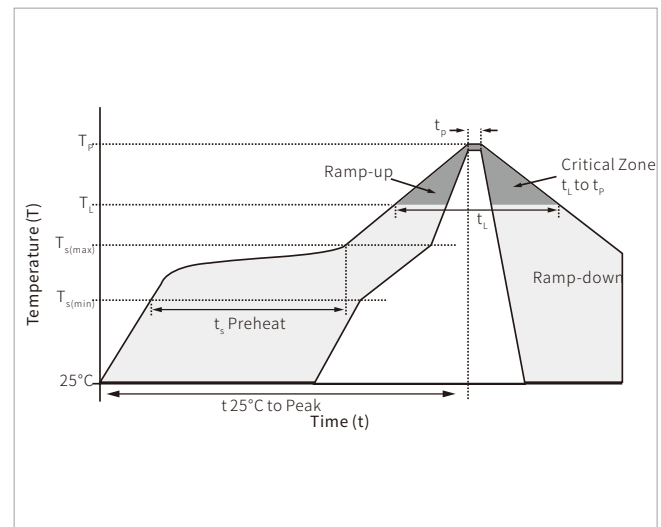
CHARACTERISTIC CURVES



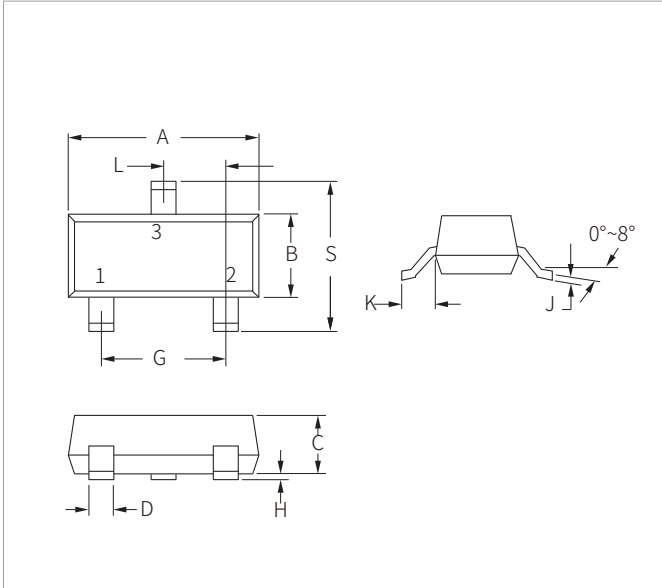


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150 $^\circ\text{C}$
	Temperature Max ($T_{s(\max)}$)	200 $^\circ\text{C}$
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3 $^\circ\text{C}/\text{second}$ max
$T_{s(\max)}$ to T_L - Ramp-up Rate		3 $^\circ\text{C}/\text{second}$ max
Reflow	Temperature (T_L) (Liquidus)	217 $^\circ\text{C}$
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260 $^\circ\text{C}$
Time within 5 $^\circ\text{C}$ of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6 $^\circ\text{C}/\text{second}$ max
Time 25 $^\circ\text{C}$ to peak Temperature (T_p)		8 minutes max.
Do not exceed		260 $^\circ\text{C}$

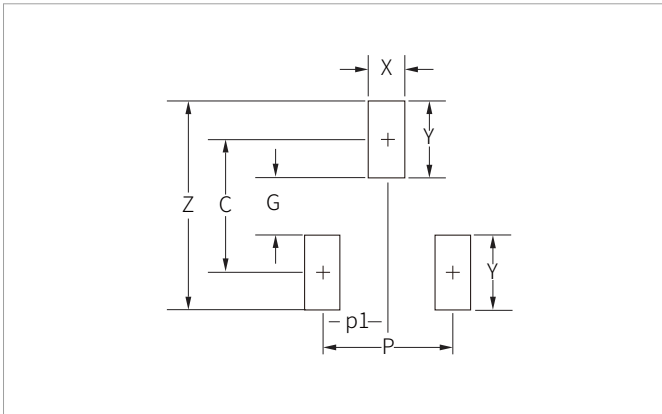


SOT-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.70	0.059	0.067
B	0.70	0.90	0.028	0.035
C	0.60	0.90	0.023	0.035
D	0.15	0.30	0.005	0.012
G	1.00BSC		0.039BSC	
H	0.00	0.10	0.000	0.004
J	0.10	0.20	0.004	0.008
K	(0.22)		(0.009)	
L	0.50BSC		0.020BSC	
S	1.45	1.75	0.057	0.069

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	(1.40)	(0.055)
P	1.00	0.039
p1	0.50	0.020
G	0.60	0.024
X	0.40	0.016
Y	0.80	0.031
Z	2.20	0.087

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SNM2N7002KCE	SOT-523	3000PCS	7"

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By QR Code

Website



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